

MACKENZIE, (J. N.) (3)

OBSERVATIONS ON THE ORIGIN AND CURE OF THE
DISEASE CALLED "HAY ASTHMA" (CORYZA
VASOMOTORIA PERIODICA).

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The therapeutic history of the disease commonly known as "hay fever" furnishes a striking illustration of the way in which errors in medicine are perpetuated through lazy subscription to prevailing ideas and blind acceptance of the dicta of "authority."

Ignorance of intra-nasal pathology on the part of those investigating the complaint, false theories founded on the examination of solitary cases, and especially the so-called pollen theory have, by drawing attention to less essential conditions, not only been insuperable barriers to therapeutic progress in the disease, but have also by the measures based upon them, in no small measure contributed to the sufferings of the unfortunate victims of this complaint.

The orthodox treatment of the advocates of the pollen theory is to keep the patient indoors, and, if possible, confined to his room during the hay fever season. He must wear spectacle frames fitted to the orbits and fill his nostrils with cotton. When out of the range of pollen he must remove the tampons from his nasal passages and add a fresh source of distress by the inhalation of irritating powders or snuffs.

Apart from innumerable other inconveniences attendant upon such a line of treatment, imagine the tortures of confinement to a closed chamber through the intense heat of our summer months; picture to yourselves the spectacle which the sufferer presents with his eye-balls covered with an unsightly apparatus, and his nasal passages stuffed with cotton, uncomfortable and unavailing, as those who have tried it will tell you.

The use of snuffs in the nasal passages is a questionable practice under any circumstances, and the general practitioner had better



write it down as a law of his practice to be extremely cautious in the use of medicine of any kind in powder form for the relief of nasal affections. But, if there is one thing above all others which contraindicates the use of powders in the nose, it is the exquisitely sensitive condition of the nasal passages during the paroxysms of so-called "hay fever." For not only do they increase the suffering of the patient, but by the excitability of the cavernous tissue which they produce, lay the foundation for future and more aggravated inflammation.

Indeed there is no more striking commentary on the inadequacy of the pollen theory than the absolute darkness which it has thrown around the treatment of this disease. Equally untenable is the theory for which Helmholtz has been held responsible that the affection is due to a minute form of animal life, a position for which there is not the slightest foundation in fact. That the disease is one of the protean manifestations of gout is a proposition which rests upon the manifestly insecure foundation, that in a certain proportion of cases a gouty tendency is discernable in the individual.

Its alleged almost invariable appearance in the higher walks of life, and notably in those of superior intellectual attainments, together with its assumed absence among inferior races or those low down in the social scale, have been dexterously wrought by Beard into the conception that the affection is the offspring of a higher civilization, the outcome of a hypersensitive nervous organization, the result of the enervating influences of nineteenth century social and intellectual life.

As maintained elsewhere, I do not regard this disease as an affection of any particular century or confined to any condition of mankind. Comparatively little is known and written concerning pathological processes among inferior races, and it is quite possible that the territorial limits of some diseases depend less upon local or race peculiarities than upon the geographical distribution of intelligent medical observers. If the affection be in truth due to derangement of the nervous system, the result of education and enervating modes of life, were not these agencies in operation amid the culture and refinement of ancient Greece and the debauching influences of the Imperial City? Since the subject has received careful attention mainly at the hands of English, American and German physicians during the past sixty or seventy years, are we to proceed straightway to the conclusion, that the affection is peculiar to the Anglo-Saxon race and to the nineteenth century?

Indeed, in the light of our present knowledge it is inconceivable that it made its first appearance at the beginning of the present century. As Dick and afterward Matthew Baillie thought, that in describing their first cases of acute laryngitis they had discovered a new disease, so Bostock in portraying the phenomena of "*catarrhus aestivus*" was led into a similar error.

That certain morbid processes referable to the nasal apparatus such as coryza and asthma, are evoked through so called idiosyncrasy pertaining to individuals or families has been known from the earliest times. The diagnostic acumen of Galen led him to the observation that in certain persons, the presence of various foods is sufficient to excite a coryza, and scattered here and there through the literature of succeeding centuries, isolated cases are found in which similar peculiarities in regard to flowers and other objects are recorded.* The medical scholar may find, too, grounds for the belief that this affection is included in the varieties of periodic coryza and convulsive asthma of the older writers and nosologists. The difference between acute coryza and the aggravated form known as hay cold is only one of degree, and it is therefore not surprising that the older writers should not have resorted, in the state of their knowledge to the nosological refinements which flow from the more advanced pathology of the present day and century.

In the days when medical writings were published in the Latin language, the necessity of recording one's observations in a foreign tongue, led to a terseness of style and incompleteness of description which often surrounds with uncertainty the exact nature of the observations recorded; but whether the cases which have descended to us were examples of true hay coryza or not, they may be placed in the same category of affection and the predisposing influences be considered identical with those provocative of the disease called in the present century, rose cold.

I do not propose to reiterate on this occasion my views concerning the etiology and pathology of this disease which have been given elsewhere.† As stated in a recent communication to the Clinical

* In certain individuals or even families this peculiar antipathy or susceptibility to particular flowers or foods takes the form of nose bleed, in others violent purging occurs or even epileptiform convulsions.

† Vide. Trans. American Laryngological Association, 1884, p. 113; N. Y. Med. Record, July 19, 1884; A Contribution to the Study of Coryza Vasomotoria Periodica, etc.: Ibid Oct. 18, 1884; Coryza Vasomotoria Periodica in the Negro, with Remarks on the Etiology of the Disease; Maryland Med. Journ., April 11, 1885; Abstract of a paper on Rhinitis Sympathetica; Read April 3, at the Clinical Society of Maryland. The second paper contains an historical account of the development of modern views in regard to the pathology and treatment of the affection.

Society, I regard the affection commonly known as "hay fever" simply as a grouping together of certain prominent and frequent symptoms of a particular form of nasal inflammation for which I have proposed the name rhinitis sympathetica, and which is characterized by a peculiar excitability of the nasal cavernous tissue possibly linked to an exalted state of the nerve centres. In order, however, to the intelligent appreciation of the treatment of the disease, I must invite your attention to certain principles which in my judgment underlie the etiology and mechanism of the paroxysms.

It should be borne in mind, in the first place, that the excitability of the turbinated nasal tissue is a secondary phenomenon, dependent as a rule, upon a direct impression made upon the sensitive nerves of the mucous membrane and upon the terminal filaments of the olfactory ; or, an indirect influence conveyed or reflected through the vasomotor centres from a distant organ, or finally, from some excitation starting in the centres themselves. This stimulation of the nerve centres, from whatever cause originating, is reflected outward probably through the sympathetic filaments which reach the turbinated structures with the pheno-palatine nerves.

Now as these nerves are distributed over the posterior and inferior portions of the nasal fossæ, (sensitive reflex area) the turgescence of the erectile substance is more noticeable over that particular area ; and it will be found that this surface represents the most sensitive spot to reflex producing expression—at least, this is my experience. If then we destroy the terminal filaments of the sensitive nerves, it follows that one avenue at least is closed against the irritative action on the nerve centres of substances derived from the external world. My practice, therefore, is to simply sear the most sensitive portions of the membrane with the flat cautery knife, taking care to include only that portion in the operation, which has been found most sensitive to irritation. I have found this procedure alone sufficient to arrest the paroxysms and give prolonged immunity from them.

This destruction of the sensitive nerve ending accomplishes then one result, and one only—it closes one door against *ab extra* irritation of the nerve centres. In order to exclude completely the influence of the latter, it is necessary in addition to remove all sources of local irritation, from whatever cause arising. If this be radically done, it will put a stop to the production of paroxysms from external influences acting directly on the nasal mucous membrane—that is all. When paroxysms are induced by agencies operating within the organism or

from reflected irritation of other parts of the body, the destruction of the sensitive nerve endings in the nasal mucous membrane will obviously be insufficient to secure immunity from further attacks. The indication here is to search carefully for any such source or cause of irritation and to direct treatment accordingly. I shall not attempt to lay down any rules for treatment in this regard. The chief indication, as I have insisted over and over again, is to diminish or abolish the reflex excitability of the erectile tissue—mark it, not to produce artificial contraction of its muscular elements—this can only be productive of temporary and not permanent good—not to repeatedly and violently bring into play the contractile power of the tissue or keep its muscular structure in a state of tetanic spasm. This can only result in a weakening of these structures and may lay the foundation for permanent dilatation of the erectile cells—but to so alter the nutrition of the nerve centres that they may not respond so easily to the impression which occasions the reflex. This is best accomplished by tonics addressed to the nervous system and by such remedies as experience shows are capable of controlling the reflex excitability of the centres.

Failing in the above methods, the destruction of the cavernous tissue with the galvano-cautery should be undertaken as a last resort. To the accomplishment of this end, the surgeon should proceed with caution, taking care to destroy as little tissue as is compatible with the radical removal of the disease. I generally make a more or less stellate incision, the advantage of which resides in the resulting cicatrix, and the greater patency of the nostril secured therefrom.

In the large majority of cases extensive destruction of the cavernous tissue is neither necessary nor advisable. The amount to be sacrificed must be determined by the exigencies of the particular case.*

In answer to the question, as to whether the operation should be performed during the so called season, or whether it were better to wait for the interregnum of immunity from the attacks, I would reply

* In regard to the operative measures to be used in a given case of hypertrophic inflammation of the nasal passages the following are my rules of practice:

1st.—Posterior hypertrophic enlargements of the turbinated bodies are most satisfactorily removed, if practicable, with the cord wire snare.

2nd.—For destruction of anterior hypertrophic swelling both of the turbinated bodies and septum, and in the rare cases when operation is necessary on the enlarged erectile bodies of the posterior portion of the septum the galvano-cautery is the most available and satisfactory agent

3rd.—Extensive destruction of cavernous tissue is most satisfactorily accomplished by means of the galvano-cautery or electrolytic process.

that there is nothing to be gained by delaying radical treatment and it is therefore my custom to operate in the interval between the paroxysms. By this means I have succeeded in preventing their return, even when the individual has been exposed to the exciting causes of the attack.

The prognosis in a given case presenting the peculiar association of symptoms of sympathetic rhinitis (*coryza vasomotoria periodica*) commonly known as "Hay Fever" will depend not only upon the special predisposing and exciting causes of the disease and the facility of their removal, but also upon the amount of structural injury done to the respiratory organs, to the central nervous system and to other portions of the body subjected to the reflex disturbance to which the frequency of the paroxysms has led. Thus, in long standing cases, chronic changes may be induced in these structures which may militate against the thorough eradication of the affection.

Each case has its peculiarities, its difficulties. In general, the prognosis can be said to be good. If the above principles of treatment be faithfully carried out, relief can always be secured, and in a fair proportion of cases, a permanent cure may be effected.

